Coronary artery ectasia causing ischemia

Husmann, L ; Herzog, B A ; Burkhard, N ; Valenta, I ; Weber, K ; Kaufmann, P A

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IMAGE OF THE MONTH

Coronary artery ectasia causing ischemia

Lars Husmann · Bernhard A. Herzog · Nina Burkhard · Ines Valenta · Klaus Weber · Philipp A. Kaufmann

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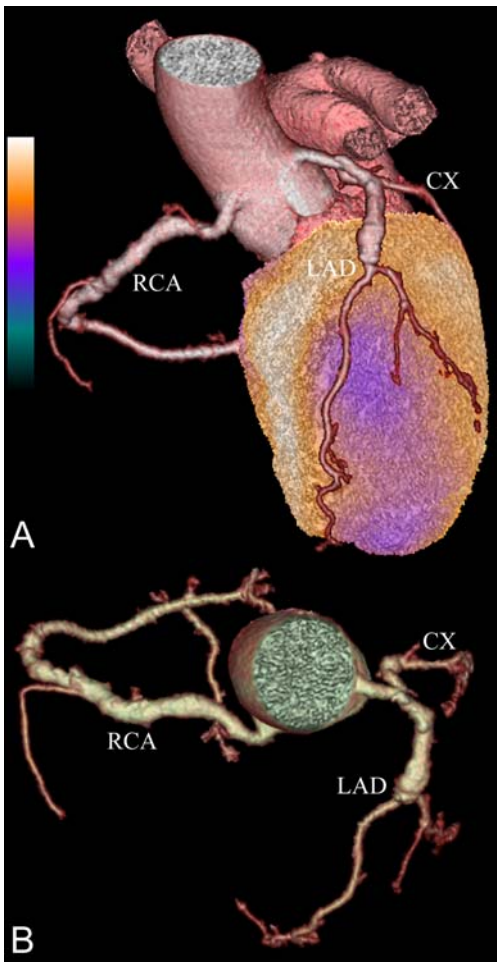
A 46-year-old male smoker (70 kg, 175 cm) with no other cardiovascular risk factors presented with recurrent episodes of chest discomfort and breathing distress at physical exercise. Cardiac stress testing on a treadmill ergometer was clinically pathologic at 100 W, and the patient was subsequently referred to non-invasive hybrid cardiac imaging.

99mTc-Tetrofosmin single-photon emission computed tomography (SPECT) images were acquired using a 1-day adenosine-stress/rest protocol and fused with a low-dose, prospectively gated computed tomography coronary angiography (effective radiation dose 1.6 mSv) [1, 2]. The latter revealed ectasia in the left anterior descending, the circumflex, and the right coronary artery (LAD, CX, RCA in panel B), but no relevant coronary artery stenosis. However, a reversible perfusion defect (ischemia) in the anterior myocardium was demonstrated by adenosine-stress SPECT (bluish colors in panel A; rest scan not shown).

Both ectasia and the absence of significant coronary artery stenosis were confirmed by invasive coronary angiography, suggesting conservative treatment [3].



L. Husmann · B. A. Herzog · N. Burkhard · I. Valenta · K. Weber · P. A. Kaufmann (✉)
Cardiovascular Center, University Hospital Zurich,
Raemistrasse 100,
8091 Zurich, Switzerland
e-mail: pak@usz.ch

P. A. Kaufmann
Zurich Center for Integrative Human Physiology,
University of Zurich,
Zurich, Switzerland

References

1. Gaemperli O, Schepis T, Valenta I, et al. Cardiac image fusion from standalone SPECT and CT: clinical experience. J Nucl Med. 2007;48:696–703.
2. Husmann L, Valenta I, Gaemperli O, et al. Feasibility of low-dose coronary CT angiography: first experience with prospective ECG-gating. Eur Heart J 2008;29:191–7.
3. Kruger D, Stierle U, Herrmann G, et al. Exercise-induced myocardial ischemia in isolated coronary artery ectasias and aneurysms ("dilated coronopathy"). J Am Coll Cardiol 1999;34:1461–70.